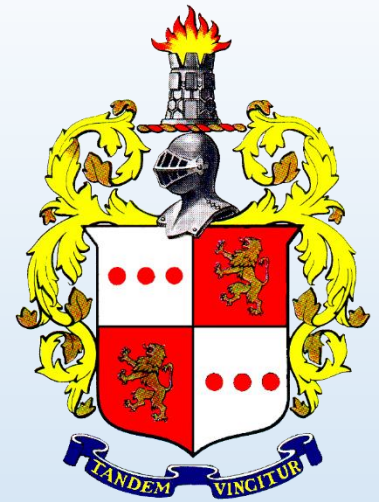


# EMERALD ASH BORER



# **INTRODUCTION**

## **Freeholder Deborah Smith**

# Richard Wolowicz

- **NJ Certified Tree Expert # 281**
- **11 Years in Municipal Forestry**
- **25 Years in Utility Forestry/Vegetation Management**

- **Contracts with Glen Ridge, Town of Morristown and Hanover Township to provide municipal shade tree management;**
- **Glen Rock, Kearny and Union City are also served on an as needed basis;**
- **Write Community Forestry Management Plans, Woodlot Management Plans (for Farmland Assessment) and expert Witness Services.**

# PRESENTATION WILL COVER:

- *Introduction of the pest*
  - *Origin, Appearance and Detection*
- *Its spread*
  - *Behavior, Magnitude and Impact*
- *What to expect*
  - *Completeness and Urgency*
- *Decisions to make*

# Emerald Ash Borer (EAB)

- Pest has killed untold millions of ash trees in forest, riparian and urban settings.
- Ash species indigenous to China are generally resistant and may eventually provide resistance genes for introgression into North American species.
- Spread by natural and human-assisted movement.

# EAB Basic facts

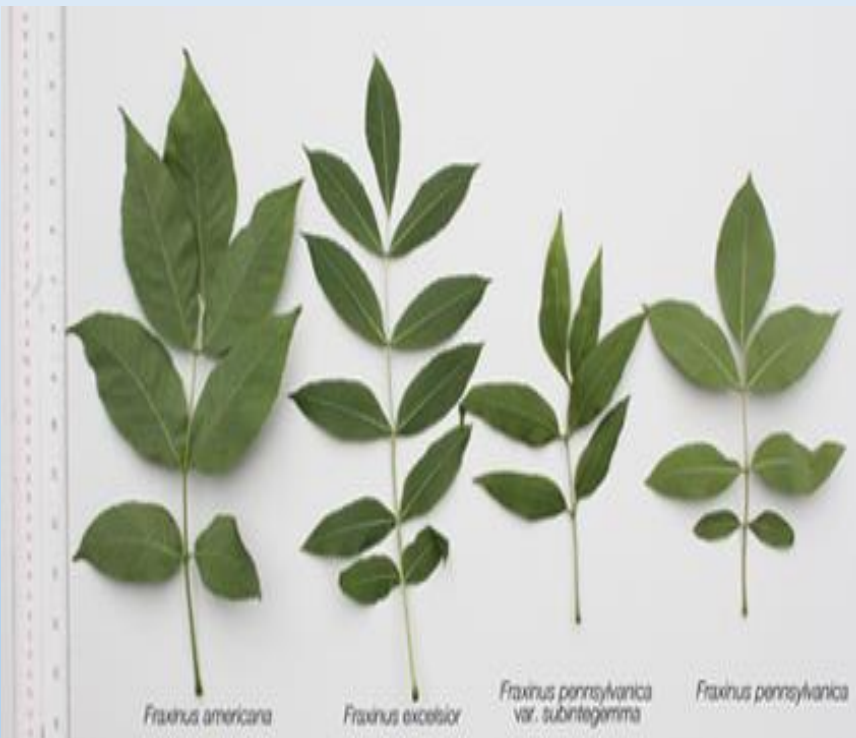
- EAB is an insect pest native to Asia that feeds on ash trees.
- It is a small green beetle about 1 cm in length.
- EAB was first discovered in North America in 2002 in Detroit, MI & Windsor, ON
- EAB kills most native ash species and cultivars.
- Adult EAB emerge through a small hole shaped like the letter “D.”







# How to Identify an Ash Tree



**1. Leaves** are compound and composed of 5 to 11 leaflets.



**2. Seeds** on female trees are paddle shaped.



**3. Branches and buds** are in pairs directly across from each other (opposite branching).



**4. Mature bark** has diamond-shaped ridges.

Iowa State University - University Extension, SUL21, Jan 2011



# How Does the EAB Spread?



- Adults fly – up to 2 miles or less
- New infestations found near campgrounds
- Movement of firewood, nursery stock, and ash waste products



# How Bad is the Infestation?

- Approximately 50 million ash trees in eastern North America have been killed.
- Hundreds of millions more are probably currently infested.
- Most of the estimated **7.5 billion** ash trees in the U.S. are likely to become infested and die as EAB spreads.
  - Dutch Elm Disease killed an estimated 75-100 million American elms.
  - Chestnut Blight killed an estimated 4 billion American chestnut trees.





# IMPACT

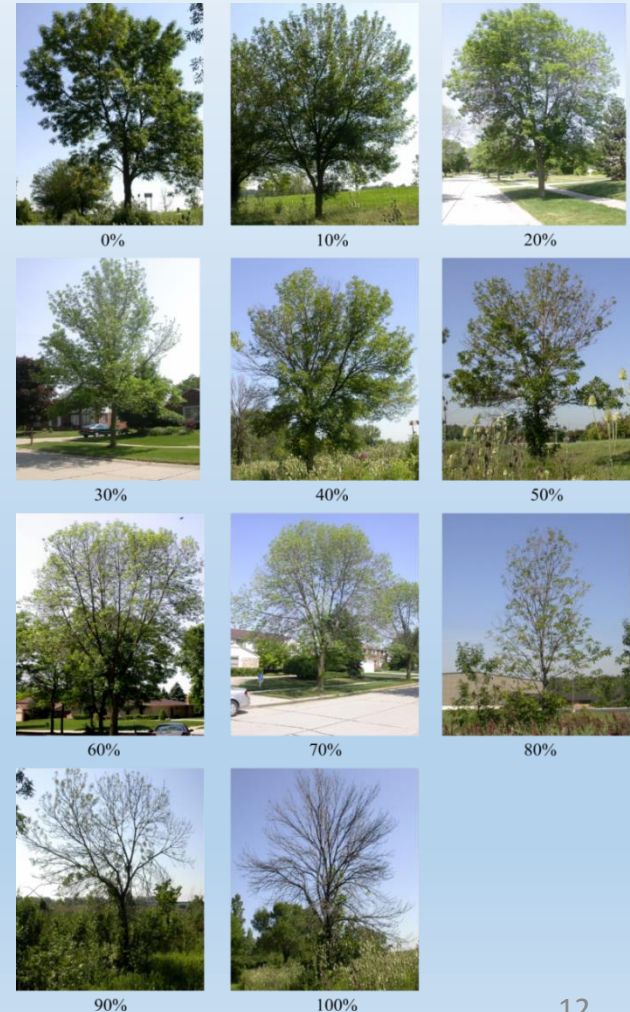
Almost all ash  
trees die in just  
a few years if  
not treated!





# EAB Infestation Facts

- It takes 3-5 years, sometimes longer, for an infested tree to decline and die.
- Newly infested trees may show no outward sign of decline for one or more years.
- Early signs of infestation include thinning crowns, branch dieback and woodpecker activity.
- There is no practical way to prevent EAB from spreading to un-infested areas.





## **IMPACT**

**Public Safety**

**Brittle, dead trees**

**Dangerous to  
remove**



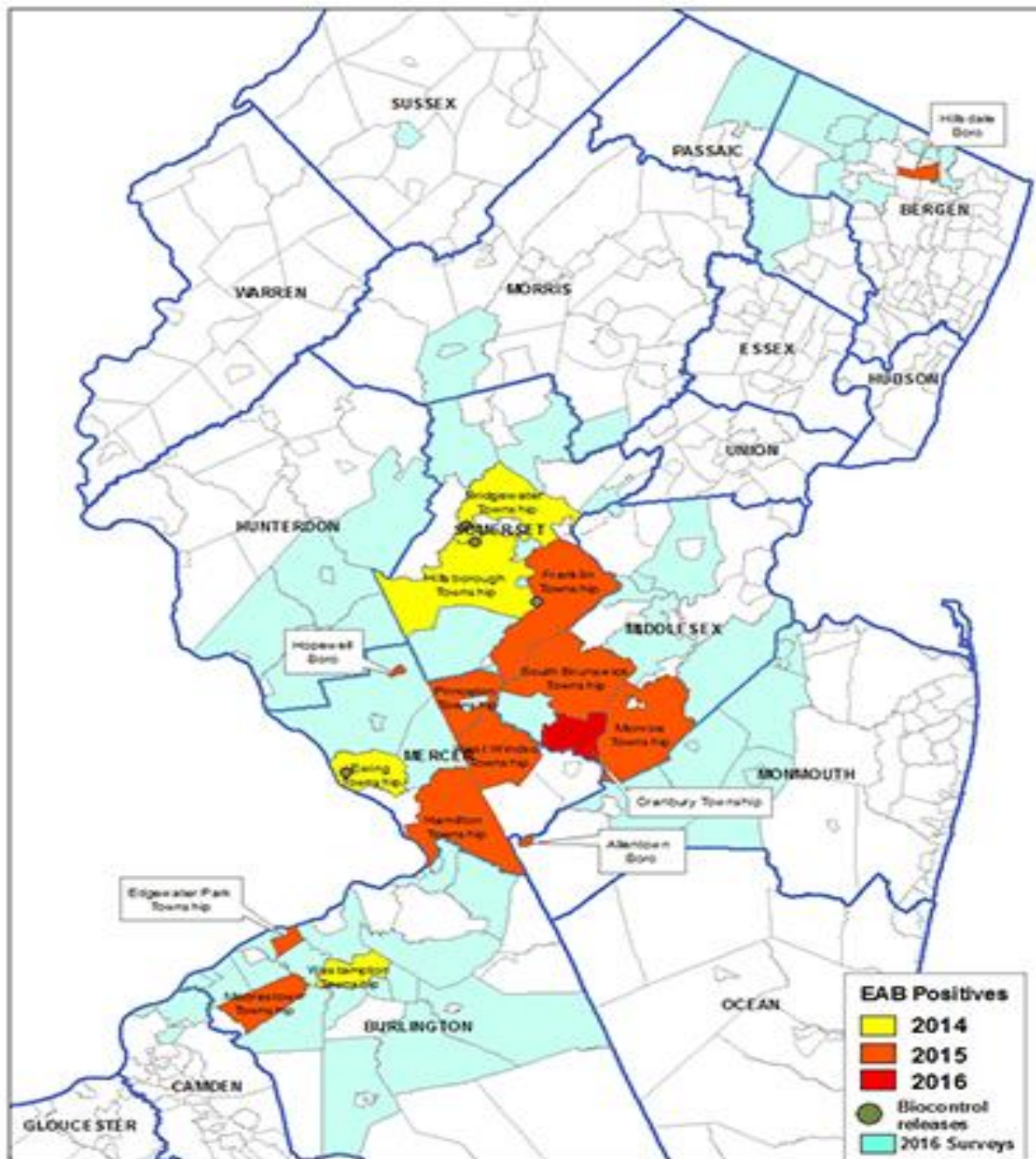
# A Street in Toledo, Ohio 3 years apart





# Cranbury, NJ Devastation







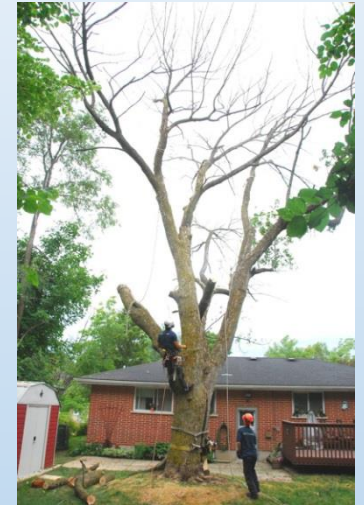
# Economic Impacts to Communities

- Cost of plan development, inventory and field work
- Cost of administration of program
- Cost of treatment or removal
- Cost of replacement trees
- Cost of wood waste disposal
- Loss of benefits from removed trees

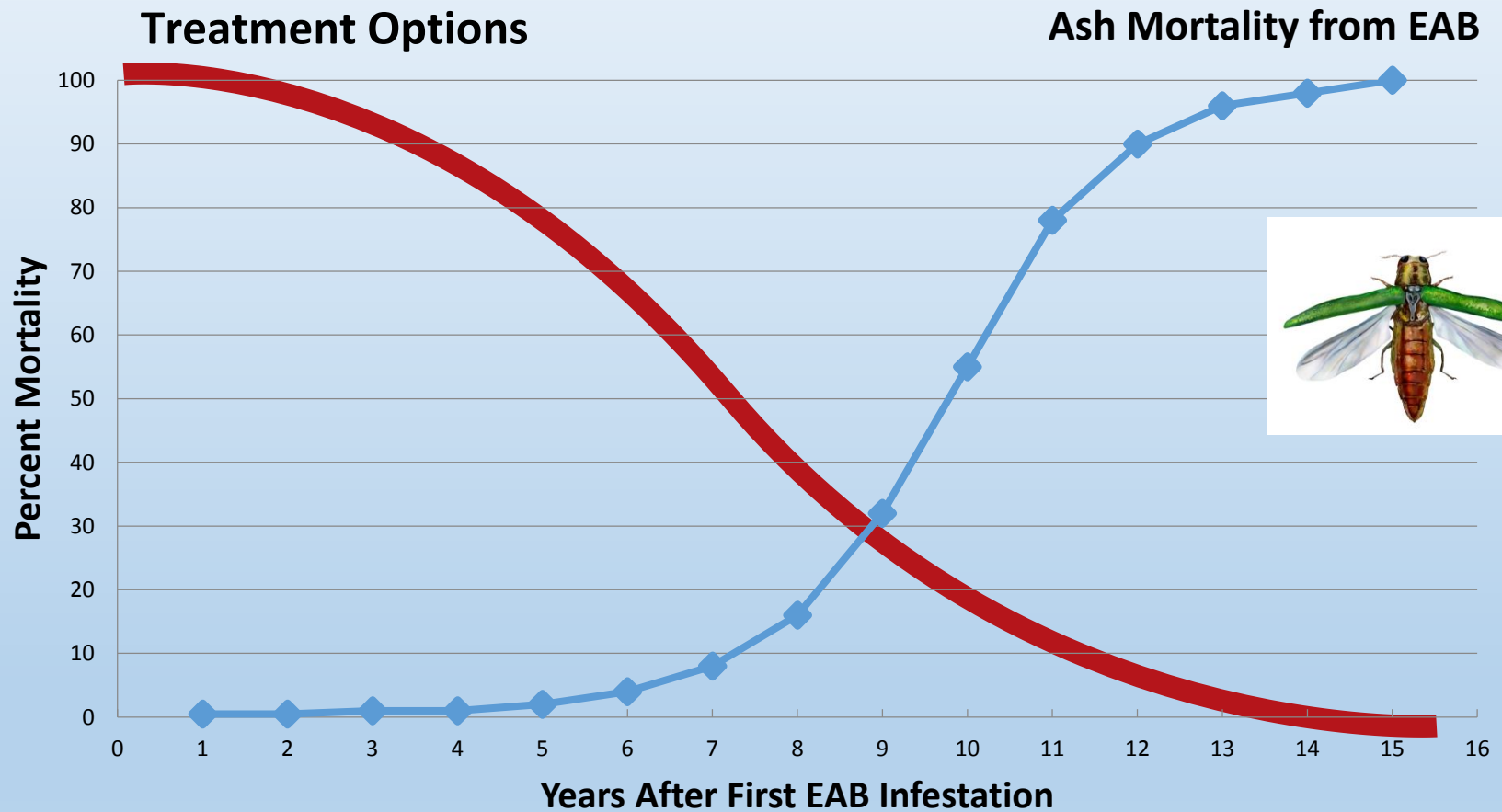


# Other Economic Impacts

- Cost to the nursery industry
- Cost to the wood products industry
- Increased air conditioning costs
- Decrease in home values



# Being Proactive is Crucial



# EAB

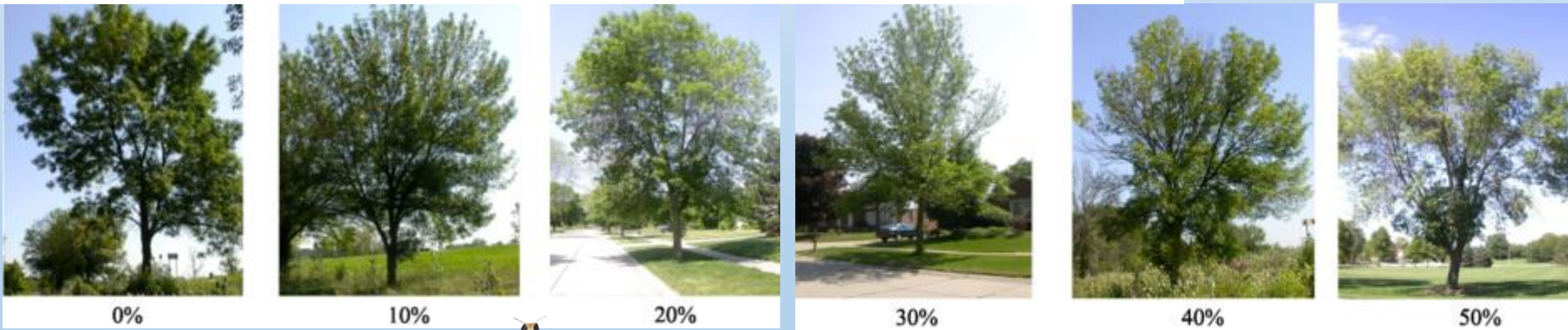
- Extremely difficult in detecting and delineating infestations;
- When damage is evident then the tree is already stressed;
- Control strategies:
  - None
  - Biologic
  - Systemic
  - SLAM (slow ash mortality)



# What we are looking for when deciding to treat:

- 30% or less canopy decline in a given year;
- Evaluating cumulative decline over multiple years.

## Acceptable Results



Low Pressure



High Pressure

# Options to Consider



- Start removing low value ash trees as soon as you can. The earlier you start:
  - the less available food for EAB,
  - the less impact to your budget,
  - the lower the overall cost,
  - the greater the availability of contractors and equipment.
- Start treating high value ash trees.
- Start replanting as soon as feasible.
- Start to plan a strategy ASAP!



# Typical Costs for tree management

- **Cost for Treatment (Not guaranteed to prevent infestation)**
  - \$7.25/diameter inch every two years for ten years. \$650 per 18" tree;
- **Removal and disposal**
  - \$465 per tree;
- **Stump grinding**
  - \$95 per 18" tree;
- **Replanting Trees**
  - \$325 per installed tree.

# SOURCES

[WWW.EMERALDASHBORER.NJ.GOV](http://WWW.EMERALDASHBORER.NJ.GOV)

<http://nj.gov/agriculture/divisions/pi/pdf/ashutilizers.pdf>

<http://nj.gov/agriculture/divisions/pi/pdf/ashutilizersmap.pdf>

[http://nj.gov/agriculture/divisions/pi/pdf/recycling\\_trees.pdf](http://nj.gov/agriculture/divisions/pi/pdf/recycling_trees.pdf)

RAINBOW TREE CARE